

# Chapter 20

## X-Ray/ Digital Imaging

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## Intraoral imaging

## Carestream CS 1200

### Intraoral Camera

Superior image quality at an affordable price



#### Features and benefits

- High image resolution (1024 x 768)
- Enhanced patient communication
- Easy to share supporting both PC and analog display, the camera's direct connections ensure fast and easy sharing between operatories
- Lightweight and compact, the CS 1200 fits easily in hands of all sizes and minimizes operator fatigue
- The rounded head and tapered shape of the camera ensure patient comfort
- Six LED illumination system automatically adjusts to ensure perfectly lit images in any lighting condition
- Stores up to 300 images within the camera itself, eliminating the need for memory cards or multiple computers.

Product	Cat. No.
CS 1200 Wired USB	6559991
Intraoral Cameras 3-year Care-Protect	5317060

#### Technical specifications

Sensor	Micron 1/2.5 CMOS
Video resolution	640 (H) x 480 (V)
Image resolution	1024 (H) x 768 (V)
Focus range	3 mm – 25 mm
Angle of view	90°
Field of view	80°
Focus	Fixed Focus
Light source	6 White LED array
Video output	TV-NTSC, TV-PAL, S-Video
Connection	USB 2.0



## Intraoral imaging

## Carestream CS 1500

## Intraoral Camera

The ideal communication tool for any dental practitioner. Elegantly styled and easy to use, Carestream Dental's first wireless intraoral camera delivers stunning images with the convenience and freedom of Wi-Fi connectivity.

## Features and benefits

- Best-in class image quality and resolution
- Patented true autofocus technology
- With built-in Wi-Fi support, the camera provides total freedom of movement
- White LED exposure ensures uniform and bright illumination
- Intraoral and extraoral imaging
- Compatible with computer and video screens
- Available as wired and wireless configuration

Product	Cat. No.
CS 1500 Wireless	6559801
CS 1500 Wired USB	6559819
Intraoral Cameras 3-year Care-Protect	5317060

## Technical specifications

Sensor	Micron 1/2.5 CMOS
Video resolution	640 (H) x 480 (V)
Image resolution	1024 (H) x 768 (V)
Focus range	1 mm to infinity
Angle of view	90°
Field of view	80°
Focus	Autofocus
Light source	8 White LED array
Video output	TV-NTSC, TV-PAL, VGA, S-Video
Connection	USB 2.0




# CS 1600 Intraoral Camera

Using Carestream Dental exclusive technology, the CS 1600 dual-modality intraoral camera makes caries screening and detection extremely simple – all the while delivering the highest image quality in the industry.\*



## Unparalleled workflow

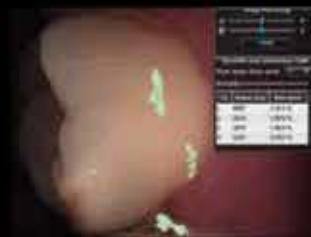
Unlike other devices that require multiple readings for each tooth, the CS 1600 provides a streamlined “scan and detect” workflow for more efficient exams.

## Here's how it works:

1. CS 1600 highlights areas of concern during video screening
2. Capture still images to further analyze and communicate results
3. Colorful signals and numerical quantification correlate to possible caries degree
4. Images are then saved to your patients' chart so you can track disease progression/regression over time



CS 1600 highlights areas of concern during screening.



Numerical values correlate to possible caries degree.



## Intraoral radiography

### Carestream CS 2100 Intraoral X-Ray System

Obtain sharp, high contrast images quickly and easily with this affordable high-frequency generator - ideal for your basic intraoral needs.

#### Features and benefits

- High-frequency DC technology at the price of a conventional generator
- Sharp and high-contrast images for easy diagnosis
- Easy-to-use and fast-setting generator thanks to its improved timer design
- Dose display after each exposure
- Ideal for digital sensors, analog films or phosphor plates
- Multiple configurations available, including ceiling mount, mobile or fixed column mount



Product	Cat. No.
CS 2100 with short arm (170 cm)	5153671
CS 2100 with standard arm (188 cm)	5153663
CS 2100 with long arm (205 cm)	5153655
CS 2100 3-year Care-Protect	5317094

#### Technical specifications

Power supply	230 – 240 V
X-ray generator	Very high frequency – DC (300 kHz)
Tube voltage	60 kV
Tube current	7 mA
Tube focal spot	0.7 mm IEC
Focal spot/skin distance	200 mm

X-ray units are also available with 100-110-130 V

## Intraoral radiography

## Carestream CS 2200 Intraoral X-Ray System



Ensure superior digital image quality in any environment with the CS 2200 system. Designed for safety and efficiency, the intuitive unit helps you make more accurate diagnoses.

### Features and benefits

- Maximum image quality with minimum exposure for better patient treatment thanks to its pre-programmed control unit
- Designed for safety and efficiency
- Total control on tube voltage (60 or 70 kV) for high contrasted or high latitude images depending on examination requirements
- Intuitive and easy-to-use thanks to its user's interface, including a dental arch timer
- Ideal for digital sensors, analog films or phosphor plates
- High frequency for better patient safety - reduces the radiation dose up to 25% in comparison with a standard generator
- After each exposure, the dose level is displayed for simple dose monitoring
- Multiple configurations available, a mobile or fixed column mount, as well as wall mounting option fully compatible with the Irix installed base



Complete unit with wall mount for replacing existing IRIX systems as well as a variety of other popular manufacturers' systems. Existing holes can be used for wall mounting

Product	Cat. No.
<b>Wall mount series</b>	
CS 2200 with short arm (170 cm)	5153580
CS 2200 with standard arm (188 cm)	5153572
CS 2200 with long arm (205 cm)	5153564
<b>Irix mount series</b>	
CS 2200 for Irix replacement with short arm (170 cm)	5159652
CS 2200 for Irix replacement with standard arm (188 cm)	5159645
CS 2200 for Irix replacement with long arm (205 cm)	5159660
CS 2200 3-year Care-Protect (Wall and Irix mount)	5317094

### Technical specifications

Power supply	230 – 240 V
X-ray generator	Very high frequency – DC (300 kHz)
Tube voltage	60 kV, 70 kV
Tube current	7 mA
Tube focal spot	0.7 mm IEC
Focal spot/skin distance	200 mm

X-ray units are also available with 100-110-130 V

## Digital intraoral radiography

# Carestream RVG 5200

## Digital Sensor

Intuitive intraoral imaging.

Affordable price.

### Features and benefits

- An ideal solution for basic intraoral imaging needs
- Exceptional images quickly and easily
- Advanced image processing tools
- 16 lp/mm true image resolution
- Affordable entry point into digital intraoral imaging



**Carestream**  
DENTAL

Product	Cat. No.
RVG 5200 size 1	5311295
RVG 5200 size 2	5311303
RVG 5200 3-year Care-Protect	5317052

### Technical specifications

	Sensor size 1	Sensor size 2
True image resolution*	16 lp/mm	16 lp/mm
Pixel size	19 µm	19 µm
External dimensions	27.6 x 37.7 mm	32.2 x 44.2 mm
Dimensions of active area	22.2 x 29.6 mm	26.6 x 35.5 mm
Number of pixels	1.82 million	2.63 million
Sensor plate thickness	7.3 mm	7.3 mm
Purpose	All-purpose sensor	Bitewing examinations
Sensor	CMOS with optical fiber technology	
Connection	USB 2.0	

\*Did you know? Theoretical resolution is a calculation of what the sensor is capable of in an ideal world, based solely upon the number of pixels and pixel size of the CMOS sensor. In contrast, true resolution adds in the components of the finished product, including sealants, shock layers, scintillators, and protective housing, as well as detector noise and scanner vibrations, to determine the measured resolution in lp/mm.

## Digital intraoral radiography

## Carestream RVG 6200

## Digital Radiography System

Maximum diagnostic precision. Film-quality digital images. Perfect for any dental application.



## Features and benefits

- 24 lp/mm true image resolution promotes maximum diagnostic precision
- Customized image contrast according to diagnostic need
- Ergonomically optimized rear entry cable attachment facilitates comfortable positioning
- Sensor cable is 20% thinner and more flexible than previous models of RVG sensors
- Workflow is reduced by two steps and is optimized to the extreme: Position. Expose. View.
- Simplified installation process verifies that the sensor is installed correctly
- NEW: Better diagnostic and improved workflow with CS Adapt



Product	Cat. No.
RVG 6200 size 1	5310719
RVG 6200 size 2	5310727
RVG 6200 3-year Care-Protect	5317052

## Technical specifications

	Sensor size 1	Sensor size 2
True image resolution*	> 24 lp/mm	> 24 lp/mm
Pixel size	19 µm	19 µm
External dimensions	27.6 x 37.7 mm	32.2 x 44.2 mm
Dimensions of active area	22.2 x 29.6 mm	26.6 x 35.5 mm
Number of pixels	1.82 million	2.63 million
Sensor plate thickness	7.3 mm	7.3 mm
Purpose	All-purpose sensor	Bitewing examinations
Sensor	CMOS with optical fiber technology	
Connection	USB 2.0	

\*Did you know? Theoretical resolution is a calculation of what the sensor is capable of in an ideal world, based solely upon the number of pixels and pixel size of the CMOS sensor. In contrast, true resolution adds in the components of the finished product, including sealants, shock layers, scintillators, and protective housing, as well as detector noise and scanner vibrations, to determine the measured resolution in lp/mm.



## Digital intraoral radiography

# Carestream RVG 6500

## Digital radiographic System

As the first RVG sensor to offer Wi-Fi compatibility, the RVG 6500 system delivers the same exquisite image quality as our wired model.



### Features and benefits

- Superior image quality for enhanced diagnostic capability thanks to an up to 20 lp/mm resolution
- Wi-Fi connectivity for faster and more secure image transfer
- Compatible with the iPad, for enhanced portability in and outside the practice
- Rounded corners for patient comfort
- Sensor available in three sizes
- Robust and reliable

Product	Cat. No.
RVG 6500 size 1	5159702
RVG 6500 size 2	5159710
RVG 6500 size 0	5159926
RVG Family 3-year Care-Protect	5317052

### Technical specifications

	Sensor size 0	Sensor size 1	Sensor size 2
True image resolution*	15 lp/mm	>20 lp/mm	>20 lp/mm
Pixel size	18.5 µm	18.5 µm	18.5 µm
External dimensions	22.2 x 30.8 mm	27.5 x 37.7 mm	32.2 x 44.1 mm
Dimensions of active area	17 x 22 mm (374 mm <sup>2</sup> )	22 x 30 mm (660 mm <sup>2</sup> )	27 x 36 mm (972 mm <sup>2</sup> )
Number of pixels	1.08 million	1.92 million	2.76 million
Purpose	Pediatric examinations	All-purpose sensor	Bitewing examinations
Sensor	CMOS, scintillator, optical fiber with shock-resistant protective layer		
Wireless technology	Wi-Fi 802.11 b&g		
Lithium battery charge cycle	Approx. 180 images		
Control box dimensions	83 (H) x 47 (W) x 16 (D) mm		

Recommended PC requirements see page 32

\*Did you know? Theoretical resolution is a calculation of what the sensor is capable of in an ideal world, based solely upon the number of pixels and pixel size of the CMOS sensor. In contrast, true resolution adds in the components of the finished product, including sealants, shock layers, scintillators, and protective housing, as well as detector noise and scanner vibrations, to determine the measured resolution in lp/mm.

## Computed radiography

## Carestream CS 7200 Intraoral Imaging Plate System



The everyday digital system that's as easy as film. With its slim, compact design, the CS 7200 is the perfect chairside system for routine intraoral exams and an easy, affordable digital solution for your practice.

### Features and benefits

- True resolution up to 17 lp/ml
- Covers most intraoral indications including peri-apical, bitewing and pediatric exams
- Space-saving design and quiet scanning
- Simple workflow – no clicks required
- Thin, flexible plates



Product	Cat. No.
CS 7200	5317037
CS 7200 3-year Care-Protect	5317086

### Technical specifications

Imaging plate scanning resolution	Super high resolution	17 lp/mm
	High resolution	14 lp/mm
	High speed	8 lp/mm
Plate Sizes	Size 0 – 22 mm x 35 mm	
	Size 1 – 24 mm x 40 mm	
	Size 2 – 31 mm x 41 mm	
Power supply	100-240 V (ac), 50/60 Hz, 1.2 A	
Connectivity	USB	
System dimensions	270 (H) x 130 (W) x 300 (D) mm	
Weight	3.5 kg	

## Computed radiography

# Carestream CS 7600

## Intraoral Imaging Plate System

The CS 7600 makes the move to digital imaging simple and affordable. The first imaging plate system to feature a fully automated and secure workflow designed to improve productivity and user experience by allowing multiple operators to use the system on multiple patients at the same time, with no waiting required and no risk of errors.



### Features and benefits

- High image resolution (up to 18 lp/mm) with a wide exposure range
- First image viewable in as few as 5 seconds.  
Full Mouth Series from 2-6 minutes
- Can be used by multiple users at the same time
- Built-in memory eliminates the risk of lost images and allows users to scan plates during network failure
- Scan & Go technology
  - Fully secure and automated workflow, avoiding plate mix-up, confusion, and mistakes
  - Secured multi-patients and multi-users management at the same time
  - Bulk scanning reduces operating time
- Remote services help reduce downtime and optimize service cost

Product	Cat. No.
CS 7600 (incl. two Scan & Go devices)	5316831
CS 7600 2 x Scan & Go device	1014315
CS 7600 3-year Care-Protect	5317086

### Technical specifications

Imaging plate scanning resolution	Super high resolution	17 lp/mm
	High resolution	14 lp/mm
	High speed	8 lp/mm
Plate Sizes	Size 0 – 22 mm x 35 mm	
	Size 1 – 24 mm x 40 mm	
	Size 2 – 31 mm x 41 mm	
	Size 3 – 27 mm x 54 mm	
	Size 4 – 57 mm x 76 mm	
Power supply	100-240 V (ac), 50/60 Hz, 1.5 A	
Display	7.5 cm (3.5") color LCD display	
Unit dimensions (without bracket)	266 (H) x 237 (W) x 259 (D) mm	
Weight	6 kg	

## Digital extraoral radiography

## Carestream CS 8100

### Extraoral Imaging System

The sleek and simple panoramic unit that's ideal for everyday use. Blending advanced technologies in an ultra-compact design, the system provides everything you need to capture high-quality, crystal-clear images in seconds.

#### Features and benefits

- Compact, slim unit – perfect for tight spaces
- Versatile imaging programs cover all your daily panoramic needs
- Use artifact-free image filters to adjust contrast and sharpness with one click
- Acquire images in 10 seconds; then access them instantly
- Convenient and practical face-to-face patient positioning
- Includes our user-friendly and powerful imaging software
- Exclusive 2D+ Technology: allows for buccal/lingual exploration and visualization of multiple slices for more details than ever
- Better diagnostic and improved workflow with CS Adapt



Product	Cat. No.
CS 8100	5311329
CS 8100 3-year Care-Protect	5317128

#### Technical specifications

##### Panoramic Modality

Sensor	CMOS
Gray scale	4096 - 12 bits
Sensor matrix	64 x 1312 pixels
Magnification	1.2 (± 10%)
Exposure time	2 to 12.5 seconds
Exposure mode	4 patient sizes (child, small, medium, large)
Radiological exam options	Full panoramic, segmented panoramic, maxillary sinus, LA TMJ x 2, LA TMJ x 4, 2D+
Input voltage (AC)	220 - 240 V - 50/60 Hz / 100 - 130 V - 50/60 Hz

##### X-Ray Generator and other specifications

Tube voltage	60 - 90 kV
Tube current	2 - 15 mA
Frequency	140 kHz
Tube focal spot	0.5 mm (IEC 60336)
Total filtration	> 2.5 mm eq. Al
Unit dimensions	330 (L) x 894 (D) x 1596 (H) mm
Weight	72 kg

## Digital extraoral radiography

## Carestream CS 8100SC

### Extraoral Imaging System

The unit features the award-winning technology and compact design concept of the CS 8100 panoramic system but with the added benefit of advanced cephalometric imaging.

#### Features and benefits

- Unrivalled combination of small size and powerful performance
- Advanced imaging technology ensures crystal-clear image capture
- Short exposure time reduces patient dose and the risk of motion blur
- Optimized visualization thanks to orthodontic pre-set filters
- Dual sensors – one for panoramic and cephalometric imaging, no need to change the sensor between examinations
- Versatile cephalometric image formats: 26 x 24 cm, 18 x 24 cm and 18 x 18 cm
- Exclusive automatic tracings for faster diagnosis
- Better diagnostic and improved workflow with CS Adapt (for details see page 30)



Product	Cat. No.
CS 8100SC	5314349
CS 8100SC 3-year Care-Protect	5320601

#### Technical specifications

##### Cephalometric modality

Technology	Scan
Sensor	CMOS
Gray scale	16384 – 14 bits
Image field	6.4 x 263.3 mm
Magnification	1.13 (± 10%)
Exposure time	3 to 10 seconds
Radiological exam options	Lateral, frontal AP or PA, oblique, submento-vertex, carpus (optional)
Cephalometric formats	26 x 24 cm, 18 x 24 cm and 18 x 18 cm
Minimum required space	1842 (L) x 1133 (D) x 1596 (min H) mm
Weight	107 kg

For panoramic modality, X-ray generator and other specifications refer to CS 8100

## Digital extraoral radiography

## Carestream CS 8100 3D

### Extraoral Imaging System



The CS 8100 3D combines 2D and 3D imaging in one unit, helping general practitioners, endodontists, periodontists and other specialists alike fulfill all of their routine imaging needs.

#### Features and benefits

- Provides best image quality for your investment
- Selectable 3D programs include four fields of view ranging from 4 x 4 cm to 8 x 9 cm
- Ultra-high resolution perfect for endodontic needs (75µm)
- Multifunction system covers a broad range of dental procedures
- Lightweight, ultra-compact unit fits easily in small spaces
- Delivers outstanding value; quick return on investment
- Easy to install, learn, and use
- Better diagnostic and improved workflow with CS Adapt

Product	Cat. No.
CS 8100 3D	5311162
CS 8100 3D Access (4 x 4, 5 x 5 cm)	5314257
CS 8100 3D 3-year Care-Protect	5317144



#### Technical specifications

##### 3D modality

Sensor	CMOS
Scan mode	Continuous and pulse
Exposure time	7 to 15 seconds
Field Of View (cm)	4 x 4 / 5 x 5 / 8 x 5 / 8 x 8 / 8 x 9
Voxel size (µm)	75µm minimum
Reconstruction time	Less than 2 minutes

##### Panoramic Modality

Sensor	CMOS
Gray scale	16384 - 14 bits
Magnification	1.2 (± 10%)
Exposure time	1.98 to 14 seconds
Exposure mode	4 patient sizes (child, small, medium, adult)
Radiological exam options	Full panoramic, segmented panoramic, maxillary sinus, LA TMJ x 2, LA TMJ x 4, segmented bitewing

##### X-Ray Generator and other specifications

Tube voltage	60 - 90 kV
Tube current	2 - 15 mA
Frequency	140 kHz
Tube focal spot	0.7 mm (IEC 60336)
Total filtration	> 2.5 mm eq. Al
Unit dimensions	330 (L) x 894 (D) x 1596 (H) mm
Weight	92 kg

## Digital extraoral radiography

# Carestream CS 9000 3D

### Extraoral Imaging System

The CS 9000 3D system's focused-field of view is ideal for endodontics, implantology and dental surgery.



#### Features and benefits

- Affordable two-in-one solution, combining real 3D technology and real panoramic technology in a single system
- The system delivers 3D exams with the highest resolution in the industry and high quality panoramic image
- Lowest dose 3D exams in the industry\* covers a wide scope of clinical needs
- Combines the benefits of focused field 3D imaging (5 x 3,7 cm) with 3D stitching program (up to 8,5 x 6,6 x 3,7 cm)
- Easy to use and to integrate into the practice with our Carestream Dental imaging software, intuitive 3D Module and without any sensor manipulation
- Face-to-face patient positioning reduces the risk of retakes
- CAD/CAM compatible: Scanning impressions to create 3D digital models
- Better diagnostic and improved workflow with CS Adapt

\*According to study by ICRP: International Committee of Radio Protection



Product	Cat. No.
CS 9000 3D	5157458
Cephalometric upgrade	5211016
CS 9000 3D 3-year Care-Protect	5317201

## Digital extraoral radiography

## Carestream CS 9000C / CS 9000C 3D Extraoral Imaging System

One-shot cephalometric imaging  
for higher image quality.



### Features and benefits

- Same features as the CS 9000 or CS 9000 3D system, plus cephalometric imaging, offering a range of new diagnostic possibilities
- Five image formats in the range from full skull 30x30 cm to 18x18 cm small field for lower dose exposures
- Automatic landmark recognition saves time and improves the workflow
- Delivers exceptional image quality thanks to exclusive and best in class "one-shot" technology
- Three automatic orthodontic enhancement filters offers unprecedented detail and anatomical views
- CAD/CAM compatible: Scanning impressions to create 3D digital models
- Better diagnostic and improved workflow with CS Adapt (for details see page 30)



Product	Cat. No.
CS 9000C	5159041
CS 9000C 3-year Care-Protect	5317185
CS 9000C 3D	5159009
CS 9000C 3D 3-year Care-Protect	5317219



## Digital extraoral radiography

## Carestream CS 9300 / CS 9300C Digital Imaging System

The CS 9300 is the all-in-one imaging solution for dental professionals. Featuring a flexible field of view for truly adaptable 3D imaging, the unit offers unprecedented diagnostic capabilities, covering the widest array of clinical applications in the market. Easily collimate the field of view, adjust resolution, and change position according to your exam specifications. The new Low Dose mode reduces radiation dose and scanning times when compared to the system's standard imaging acquisition program.

### Features and benefits

- Adjustable field of view size from 5x5 cm to 17x13.5 cm
- Adaptable to all examination needs
- Delivers up to an 85% lower radiation dose than 2D panoramic imaging with Low Dose mode
- Combines industry-leading panoramic imaging with powerful 3D imaging
- Full DICOM compliance; compatible with third-party software such as Nobel Guide, Simplant, and SureSmile
- Optional one-shot cephalometric imaging
- Variable focal trough 2D panoramic image
- CAD/CAM compatible: Scanning impressions to create 3D digital models
- Better diagnostic and improved workflow with CS Adapt

Available in four versions: CS 9300, CS 9300C, CS 9300 Select and CS 9300C Select



Product	Cat. No.
CS 9300	5210646
CS 9300 3-year Care-Protect	5317235
CS 9300 Select*	5303573
CS 9300 Select 3-year Care-Protect	5317250
CS 9300C	5210984
CS 9300C 3-year Care-Protect	5317276
CS 9300C Select*	5303607
CS 9300C Select 3-year Care-Protect	5317292
Cephalometric upgrade	5211016



SCAN



DESIGN



MILL

# CS 3500 INTRAORAL SCANNER

Portable, powder-free, true colour intraoral scanning

The CS 3500 combines patient comfort with clinical flexibility, enabling clinicians to quickly capture digital impressions. The CS 3500 is easy to use and fits seamlessly into any practice's restorative workflow.

## Features and benefits

- Exceptional precision for high definition colour 2D images and 3D scans
- 3D margin line tool - precisely mark the margin line, and adjust it as necessary
- Fast capture mode
- Innovative light guidance system that aides in the capture of the data during the image acquisition process
- Requires no powder or liquid for faster scanning and improved patient comfort
- No external heater is necessary to prevent mirror fogging during image capture
- Features a slim scanner head and different tip sizes for patient comfort
- Impressive average precision of 30 µm and 1024 x 768 image resolution
- Direct USB connection, no trolley needed



## Technical specifications

Sensor technology	Effective pixels: 1.3 megapixels
Resolution	Still image: 1024 x 768 pixels Video: 640 x 480 pixels
Accuracy	30 µm (average precision)
Illumination	Four-colour LED: Amber, Blue, Green, UV
Field of view	16 x 12 mm with normal tip 12 x 9 mm with additional smaller tip
Cable length	2.5 m
Depth of field	-2 to +13 mm
Digital connection	USB 2.0 High Speed
Dimensions without cable	245 x 37 x 62 mm
Weight	295 g

Product	Cat. No.
CS 3500	6563977



# CS 3600 INTRAORAL SCANNER

Scan smarter. Easier. Faster. Open.

The CS 3600 intraoral scanner from Carestream Dental puts smarter scanning in your hands, whether your practice handles restorative, orthodontic or implant cases, the CS 3600 adapts to your needs by making digital impression capture fast and easy.

## Features and benefits

- High speed continuous scanning delivers a super fast simple, smooth and efficient user experience
- Intelligent Matching System allows you to freely complete any missing data in any area
- Scan data history allows you to remove any excess scanned tissue for a more refined final digital impression
- Facilitates a wide range of applications, with dedicated workflows for restorations, orthodontics and implantborne restorations
- An intuitive, guided step-by-step user interface helps to simplify the transition to a digital workflow
- Autoclavable, reusable tips in two interchangeable styles optimize ergonomics while offering flexible
- Precise, accurate full 3D HD color scanning provides superb image quality
- Open system scanning provides optimal flexibility due to open .stl and .ply file outputs



## Technical specifications

Sensor technology	1/2 inch CMOS
Illumination	LED, Amber, Blue, Green
Field of view	13 x 13 mm
Depth of field	-2 to +12 mm
Anti-fogging technology	Actively heated tip, guaranteed non-fogging operation when used intraorally
Cable length	2.7 m (1.8 m + 0.9 m)
Digital connection	USB 2.0 High Speed
Dimensions without cable	220 x 38 x 58 mm for normal and side tips
Weight	245 x 37 x 62 mm
Handpiece	295 g
Power box (Input / Output)	75 x 21 x 21 mm (12V 2A / 12V 2A)
Adapter Input / Output	100-240V ~ 50/60Hz, 600mA / 12.0V 2.0A

Product	Cat. No.
CS 3600 Intraoral Scanner	6568745







# CBCT IMPRESSION SCANNING

## Accurate 3D models plus broad diagnostic capabilities

Add digital impressions to the list of applications for Carestream Dental CBCT systems. Using the CS 9300, CS 9000 3D, CS 8100 3D, you can scan traditional impressions to create high precision 3D models quickly and easily.

We provide a smooth transition to digital, with a familiar impression workflow and a high degree of accuracy.

### Features and benefits

- Precise scanning, even for hard-to-reach areas, for superior clinical results
- Digital impressions with an average resolution of 30  $\mu\text{m}$
- Works with any A-silicon impression material
- Covers single tooth indications (full crown, inlay, onlay)
- Intuitive interface and dedicated platform for fast and precise scanning
- Open STL format fits any workflow

An upgrade kit is required for 3D units produced prior to 2011.

### Three simple steps to a 3D model



Product	Cat. No.
CBCT STL Converter (1 activation)	5310784



**1** Take impression and bite using silicon material

**2** Scan the impression using the CS 9300 or CS 9000 3D

**3** The scans are automatically converted in a 3D model

**Carestream**  
DENTAL



SCAN



DESIGN



MILL

# CS RESTORE SOFTWARE



Fast, simple, automated restoration design

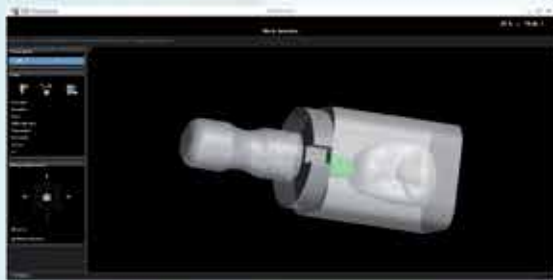
CS Restore, part of CS Solutions CAD/CAM restorations portfolio, dramatically simplifies the design process. It guides you step by step; automating critical tasks like margin tracing, tooth design and occlusion management.

## Features and benefits

- Complete restorations in just few clicks
- Intuitive software that guides dentists through the design process
- Can be used for crowns, inlays and onlays
- Automatic tooth design for custom-fit and highly functional results
- Open system with flexible options for digital impressions



Product	Cat. No.
CS Restore (5 activations)	5310362



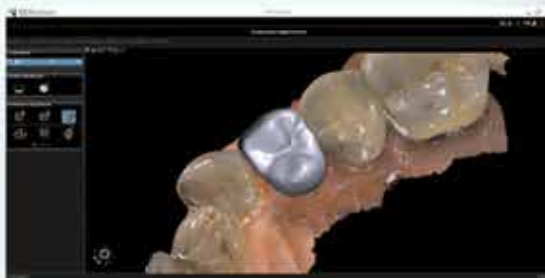
Automatic placement in the block



Automatic margin tracing



Indication, material and segmentation



Automatic tooth design

# CS MODEL SOFTWARE



## The model of perfection for orthodontic applications

Create digital models in minutes with flexible 3D scanning options.

Eliminate the hassles and costs of plaster models with CS Model part of the new CS Solutions for orthodontics. When used with the CS 3500 intraoral scanner or our CBCT scanning systems, CS Model makes it easy to create accurate digital models for orthodontic applications. And whether you use traditional or digital impression methods, CS Model is designed to fit easily into your current workflow so the perfect digital model is just minutes away.



### Features and benefits

- Obtain new models in a fraction of the time
- Create digital copies and then discard existing physical models to save space
- Store models digitally to eliminate plaster
- Avoid time-consuming model inventory procedures
- Send digital files directly to lab for appliance fabrication
- Choose from multiple scanning options to fit your workflow

Product	Cat. No.
CS Model (10 activations)	5313663





SCAN



DESIGN



MILL

# CS 3000 MILLING MACHINE

## Fast, precise and simple milling

The CS 3000 combines high speed and precision ( $\pm 25 \mu\text{m}$ ) to ensure beautiful crowns with smooth surfaces. Ideal for single tooth restorations, the CS 3000 supports a wide range of applications.

### Features and benefits

- Four-axis brushless motor and single bur for high-quality, anatomically accurate restorations
- High-speed, vibration-free milling for smooth surfaces on all-ceramic, hybrid ceramic and resin-based restorations
- Robust and reliable technology provides long-term accuracy
- Versatile indications including full crowns, inlays and onlays
- Uses industry standard blocks
- Compact and self-contained: no need for drain, water supply or compressed air
- Easy to install, operate and maintain



**Carestream**  
DENTAL

Product	Cat. No.
CS 3000	5310602

### Technical specifications

Milling unit	4 axis
Spindle speed	Up to 60,000 rpm
Motor technology	Brushless
Maximum rated input power	230 VA
Milling accuracy	$\pm 25 \mu\text{m}$
Input Voltage (AC)	100 - 240 V 50/60 Hz
Unit dimensions	590 x 645 x 465 mm
Weight	72.5 kg (160 lb.)





We offer a full range of open CAD/CAM solutions for dentists. From ultra-fast intraoral scanning to high-precision chairside milling, our cutting-edge digital solutions include all the necessary tools for a completely integrated and digital workflow. The open interfaces between devices and software allow you to choose either the entire workflow solutions or only certain parts, according to your needs.

- World's first dental unit integrated intraoral scanner
- Real-time scanning data is now immediately available from your chairside tablet or laptop
- Conveniently control from the dental unit's foot control, leaving your hands free for scanning

## The Same Day Dentistry System



Scan

### Planmeca PlanScan®

- Powder-free scanning
- Extremely easy to use
- Real-time, quick scanning
- True dental unit integration
- Autoclavable tip for perfect infection control
- Accurate results from single indication to full arch
- Comfortable solution
- Open STL format
- Windows support



Design

### Planmeca PlanCAD® Easy

- Easy design of inlays, onlays, veneers, crowns and bridges
- Fully automated design from an anatomic tooth library
- Design up to 16 teeth in the same session
- Superimposed camera view for easy marking of margins
- User-friendly tools
- Only five steps from work description to milling



Mill

### Planmeca PlanMill® 40

- High precision milling unit
- Two-spindle system
- High-speed motors
- Different strategies for each material – optimised speed without compromising quality
- Perfect milling even for ultra thin veneers
- Tool changer for 6 burs
- Automated tool quality control after each milling

## The Same Day Dentistry Workflow

**PLANMECA**  
Connecting you to a world of  
Digital Dentistry





## Planmeca ProOne® 2D

Full-featured panoramic X-ray unit, featuring cutting-edge innovations combining extensive diagnostic capabilities and superior image quality into a compact, easy-to-use package.

### User interface provides guidance

The full-colour graphical user interface provides clear texts and symbols to guide you through your procedure. Settings are logically grouped and easy to understand, speeding up imaging and allowing you to focus on positioning your patient correctly and communicating with them.

### Easy patient positioning

Open patient positioning and side entry minimise errors caused by incorrect patient positioning by allowing you to monitor the patient freely from both the front and side. Side entry allows easy access for all patients – standing or seated. Patient positioning is assisted by our triple laser beam system, which indicates the correct anatomical positioning points.

### Autofocus – for perfect panoramics every time

The unique Autofocus feature automatically positions the focal layer using a low-dose scout image of the patient's central incisors. Landmarks in the patient's anatomy are used to calculate placement, enabling practically error-free patient positioning and dramatically reducing the need for retakes. The result is the perfect panoramic image, every time.

### Optimal imaging programs

**Planmeca ProOne®** offers you a wide variety of imaging programs for different radiographic needs. You can also select the correct exposure formats to minimise the radiation dose for all types of patients and diagnostic purposes.



- reddot design award 2009, Germany
- Fennia Prize 2009, Finland (Honorary mention)
- iF product design award 2008, Germany
- iF design award china 2007 (Honorary mention)



reddot design award  
winner 2009



With design and operation principles based on the latest scientific research, technological innovations and the most demanding needs of modern dentistry, the **ProMax® 2D** is effortless in use and comfortable for the patient.



	ProMax SCARA 2	ProMax SCARA 3
Basic 2D programs	X	X
Autofocus / Easy positioning	X	X
Upgradable with Ceph.	X	X
Dynamic Exposure Control	X	X
SCARA Arm	X	X
Standard panoramic	X	X
Lateral TMJ	X	X
PA TMJ	X	X
PA Sinus	X	X
Paediatric mode for each standard / optional mode	X	X
Horizontal and vertical segmenting	X (Opt.)	X (Opt.)
Bitewing	X (Opt.)	X (Opt.)
True Bitewing		X (Opt.)
Interproximal panoramic		X (Opt.)
Orthogonal panoramic		X (Opt.)
Lateral-PA TMJ		X (Opt.)
Lateral multi-angle TMJ		X (Opt.)
PA multi-angle TMJ		X (Opt.)
PA linear sinus		X (Opt.)
Lateral sinus		X (Opt.)
Digital linear tomography		X (Opt.)
Upgradable to 3D	X (Opt.) (New arm)	X (Opt.)

- Ideal resolutions and optimal balance between image quality and patient dose
- Complies with ALARA principle (As Low As Reasonably Achievable)
- SCARA arm (Selectively Compliant Articulated Robot Arm) provides flexible, precise & complex movements
- DEC (Dynamic exposure Control) measures and adjusts radiation levels

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Digital Dentistry



## Planmeca ProX™ & ProSensor® HD

Our **Planmeca ProSensor®** intra-oral sensor uniquely combines patient-centric design with usability and durability. Paired with Planmeca **ProSensor® HD** intraoral sensor offers a unique combination of unparalleled image quality, high-end patient-centred design, and usability.

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### Planmeca ProX™

**Planmeca ProX™** is our latest intraoral X-ray unit featuring in our exceptional range of imaging products. This advanced unit provides easy and precise positioning, a straightforward imaging process and top quality images in high resolution.

- Optimal images for all diagnostic needs.
- Variable kV and mA
- Quick and easy to use
- Pre-programmed quick settings
- Digital-ready
- Smooth workflow with **Planmeca Romexis®**
- Versatile installation options



### Planmeca ProSensor® HD

Benefit from the ultimate in user-friendly intraoral imaging by combining Planmeca ProX with the **Planmeca ProSensor® HD** digital sensor system. The image is displayed on the screen just seconds after exposure, significantly reducing the time needed for an intraoral X-ray examination compared to imaging plates or conventional film resolution.

- True resolution of over 20 lp/mm
- Sharp and low-noise images with high contrast
- Wide dynamic range
- Three sensor sizes with rounded edges
- Magnetic connector for ease of use
- Colour-coded LED light for visual feedback
- Hermetically sealed ensures effective infection control
- Fully compatible with Windows and Mac OS
- Plug and play USB version
- Five-year warranty program

Our comprehensive intra-oral imaging family is now complemented by a compact and intelligent imaging plate scanner. **Planmeca ProScanner™** offers a fast scanning process and smart design details to support your everyday tasks. It is a powerful solution for both chair-side and shared multi-room use.

- Ideal for chairside and multi-room use
- Easy and intelligent use
- Magnetized 'push and go' feeding tray
- Embedded eraser prepares plates for immediate reuse
- Preview image displays on LCD touch-screen
- Streamlined elegant design
- Top-quality images in just a few seconds
- 100 most recent images saved to scanner SD card



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### Smart imaging plates in all sizes

**Planmeca ProScanner™** supports all imaging plate sizes – 0, 1, 2, 3 and 4c. The extra thin plates are comfortable for the patient, and are equipped with an RFID chip holding an electronic serial number. You can count exposures, control the quality and view images using the serial number of each plate in **Planmeca Romexis®** software.



### Perfect for multi-room clinics

Shared use is based on RFID technology to automatically connect the patient file with the correct imaging plate. Prior exposure, the serial number of the plate is read in the treatment room with Planmeca **ProID™** RFID reader. Once the image has been scanned, it is automatically sent to the correct patient file and workstation.



## Planmeca ProMax® 3D family

**Planmeca ProMax® 3D** is a product family consisting of exceptional all-in-one units. With three different types of three-dimensional imaging as well as panoramic, extraoral bitewing and cephalometric imaging these intelligent products can meet all your maxillofacial imaging needs.

### Unique 3D combination – an industry first

We're the first company to combine three different types of 3D data with one X-ray unit. The **Planmeca ProMax® 3D** family brings together a Cone Beam Computed Tomography (CBCT) image, 3D face photo and 3D model scan into one 3D image – using the same advanced software. This 3D combination creates a virtual patient in 3D, helping you with all your clinical needs.

### Pioneering Planmeca Ultra Low Dose™ protocol. An even lower patient dose than in panoramic imaging

**Planmeca ProMax® 3D** units offer a unique **Planmeca Ultra Low Dose™** imaging protocol, enabling CBCT imaging with an even lower effective patient dose than standard 2D panoramic imaging. This pioneering imaging protocol is based on intelligent 3D algorithms developed by Planmeca and offers a vast amount of detailed anatomical information at a very low patient dose.



- Ideal resolutions and patient dose levels that always comply with the ALARA (As Low As Reasonably Achievable) principle
- Optimal volume size and location for every clinical need
- Special imaging protocols for dental and ENT applications
- Open patient positioning and unmatched comfort
- True all-in-one unit suitable for 2D imaging as well as 3D
- Easy to use with a simple, intuitive interface



ProFace 'virtual patient'



User-friendly GUI



Implant planning



4D jaw motion



Region of Interest



Model scanning

## The Fantastic Five

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ProMax® 3D s   ProMax® 3D Classic   ProMax® 3D Plus   ProMax® 3D Mid   ProMax® 3D Max



Which machine is right for you?

	3D s	3D Classic	3D Plus	3D Mid	3D Max
3D dental programs	X	X	X	X	X
3D ENT programs	-	-	X	X	X
ProFace 3D face photo	X	X	X	X	X
3D model scans	X	X	X	X	X
2D panoramic imaging	X	X	X	X	X
2D cephalometric imaging	X	X	X	X	-



	3D s	3D Classic	3D Plus	3D Mid	3D Max
Tooth	ø50 x 80mm ø50 x 50mm	ø50 x 80mm ø50 x 50mm	ø40 x 50mm ø40 x 70mm	ø40 x 50mm ø40 x 80mm	ø50 x 55mm
Teeth		ø80 x 80mm ø80 x 50mm	ø70 x 50mm ø70 x 70mm ø90 x 50mm ø90 x 90mm	ø80 x 50mm ø80 x 80mm ø100 x 60mm ø100 x 100mm	ø100 x 55mm ø100 x 90mm
Jaw			ø160 x 50mm ø160 x 90mm	ø200 x 60mm ø200 x 100mm	ø130 x 55mm ø130 x 90mm
Face				ø200 x 170mm	ø100 x 130mm ø130 x 130mm ø130 x 160mm
Skull					ø230 x 160mm ø230 x 260mm